Name:

at1110paper_practice_test (v37)

1. Expand the following expression into standard form.

$$(7x + 2)^2$$

$49x^2 + 14x + 14x + 4$

$49x^2 + 28x + 4$

2. Solve the equation with factoring by grouping.

$$8x^2 - 20x + 6x - 15 \;=\; 0$$

$(4x + 3)(2x - 5) = 0$

$x = \dfrac{-3}{4} \qquad x = \dfrac{5}{2}$

3. Solve the equation.

$$(5x - 4)(8x + 3) \;=\; 0$$

$x = \dfrac{4}{5} \qquad x = \dfrac{-3}{8}$

4. Expand the following expression into standard form.

$$(7x - 8)(3x - 4)$$

$21x^2 - 28x - 24x + 32$

$21x^2 - 52x + 32$

5. Solve the equation.

$$7x^2 + 2x + 6 \;=\; 2x^2 - 5x + 4$$

$$5x^2 + 7x + 2 = 0$$
$$(5x + 2)(x + 1) = 0$$
$$x = \frac{-2}{5} \qquad x = -1$$

6. Expand the following expression into standard form.

$$(9x + 5)(9x - 5)$$

$$81x^2 - 45x + 45x - 25$$
$$81x^2 - 25$$

7. Factor the expression.

$$x^2 + x - 42$$

$$(x - 6)(x + 7)$$

8. Factor the expression.

$$64x^2 - 49$$

$$(8x - 7)(8x + 7)$$